6EB8

# 6EB8

## HIGH-MU TRIODE—SHARP-CUTOFF PENTODE

9-PIN MINIATURE TYPE

### GENERAL DATA

**Electrical:**

Heater, for Unipotential Cathodes:

| | | |
|---|---|---|
| Voltage | 6.3 ± 10% | ac or dc volts |
| Current | 0.75 | amp |

Direct Interelectrode Capacitances:°

| | | |
|---|---|---|
| *Triode Unit:* | | |
| Grid to plate | 4.4 | μμf |
| Grid to cathode and heater | 2.4 | μμf |
| Plate to cathode and heater | 0.36 | μμf |
| *Pentode Unit:* | | |
| Grid No.1 to plate | 0.1 max. | μμf |
| Grid No.1 to cathode & internal shield & grid No.3, grid No.2, and heater | 11 | μμf |
| Plate to cathode & internal shield & grid No.3, grid No.2, and heater | 4.2 | μμf |
| Triode grid to pentode plate | 0.018 max. | μμf |
| Pentode grid No.1 to triode plate | 0.005 max. | μμf |
| Pentode plate to triode plate | 0.17 max. | μμf |

**Characteristics, Class $A_1$ Amplifier:**

| | *Triode Unit* | *Pentode Unit* | | |
|---|---|---|---|---|
| Plate-Supply Voltage | 250 | 45 | 200 | volts |
| Grid-No.2 Supply Voltage | - | 125 | 125 | volts |
| Grid-No.1 Voltage | -2 | 0 | - | volts |
| Cathode Resistor | - | - | 68 | ohms |
| Amplification Factor | 100 | - | - | |
| Plate Resistance (Approx.) | 37000 | - | 75000 | ohms |
| Transconductance | 2700 | - | 12500 | μmhos |
| Plate Current | 2 | 40* | 25 | ma |
| Grid-No.2 Current | - | 15* | 7 | ma |
| Grid-No.1 Voltage (Approx.) for plate μa = 100 | - | - | -9 | volts |
| Grid Voltage (Approx.) for plate μa = 20 | -5 | - | - | volts |

**Mechanical:**

| | |
|---|---|
| Operating Position | Any |
| Maximum Overall Length | 2-5/8" |
| Maximum Seated Length | 2-3/8" |
| Length, Base Seat to Bulb Top (Excluding tip) | 2" ± 3/32" |
| Diameter | 0.750" to 0.875" |
| Dimensional Outline | *See General Section* |
| Bulb | T6-1/2 |

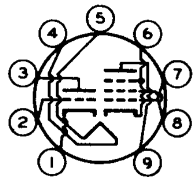
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## HIGH-MU TRIODE— SHARP-CUTOFF PENTODE

Base. . . . . . . . . .Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW. . . . . . . . . . . . 9DX

Pin 1 - Triode Cathode
Pin 2 - Triode Grid
Pin 3 - Triode Plate
Pin 4 - Heater
Pin 5 - Heater




Pin 6 - Pentode Cathode, Grid No.3, Internal Shield
Pin 7 - Pentode Grid No.1
Pin 8 - Pentode Grid No.2
Pin 9 - Pentode Plate

### AMPLIFIER — Class $A_1$

**Maximum Ratings,** *Design-Maximum Values:*

| | *Triode Unit* | | *Pentode Unit* | | |
|---|---|---|---|---|---|
| PLATE VOLTAGE . . . . . . . | 330 | max. | 330 | max. | volts |
| GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE. . . . . . | - | | 330 | max. | volts |
| GRID-No.2 VOLTAGE . . . . . | - | *See Grid-No.2 Input Rating Chart at front of Receiving Tube Section* | | | |
| GRID-No.1 (CONTROL-GRID) VOLTAGE: | | | | | |
| Positive-bias value . . . | 0 | max. | 0 | max. | volts |
| PLATE DISSIPATION . . . . . | 1 | max. | 5 | max. | watts |
| GRID-No.2 INPUT: | | | | | |
| For grid-No.2 voltages up to 165 volts . . . . | - | | 1.1 | max. | watts |
| For grid-No.2 voltages between 165 and 330 volts . . . . . . . . . | - | *See Grid-No.2 Input Rating Chart at front of Receiving Tube Section* | | | |
| PEAK HEATER-CATHODE VOLTAGE: | | | | | |
| Heater negative with respect to cathode. . . | 200 | max. | 200 | max. | volts |
| Heater positive with respect to cathode. . . | 200▲ | max. | 200▲ | max. | volts |

**Maximum Circuit Values:**

| | *Triode Unit* | | *Pentode Unit* | | |
|---|---|---|---|---|---|
| Grid-No.1-Circuit Resistance: | | | | | |
| For fixed-bias operation. | 0.5 | max. | 0.25 | max. | megohm |
| For cathode-bias operation . . . . . . . | 1 | max. | 1 | max. | megohm |

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## HIGH-MU TRIODE—
## SHARP-CUTOFF PENTODE

° Without external shield.

* This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

▲ The dc component must not exceed 100 volts.



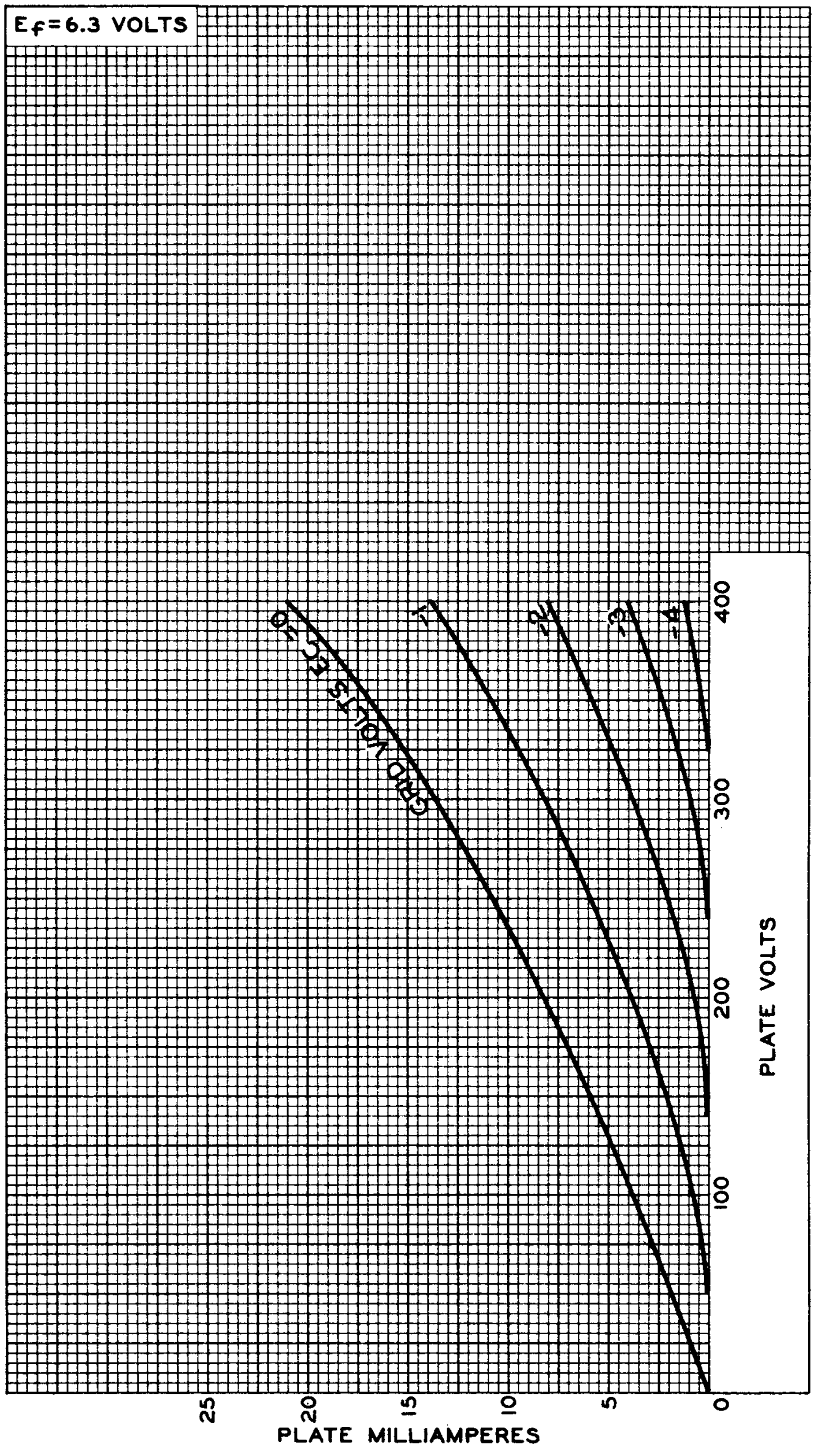
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## AVERAGE PLATE CHARACTERISTICS

### TRIODE UNIT



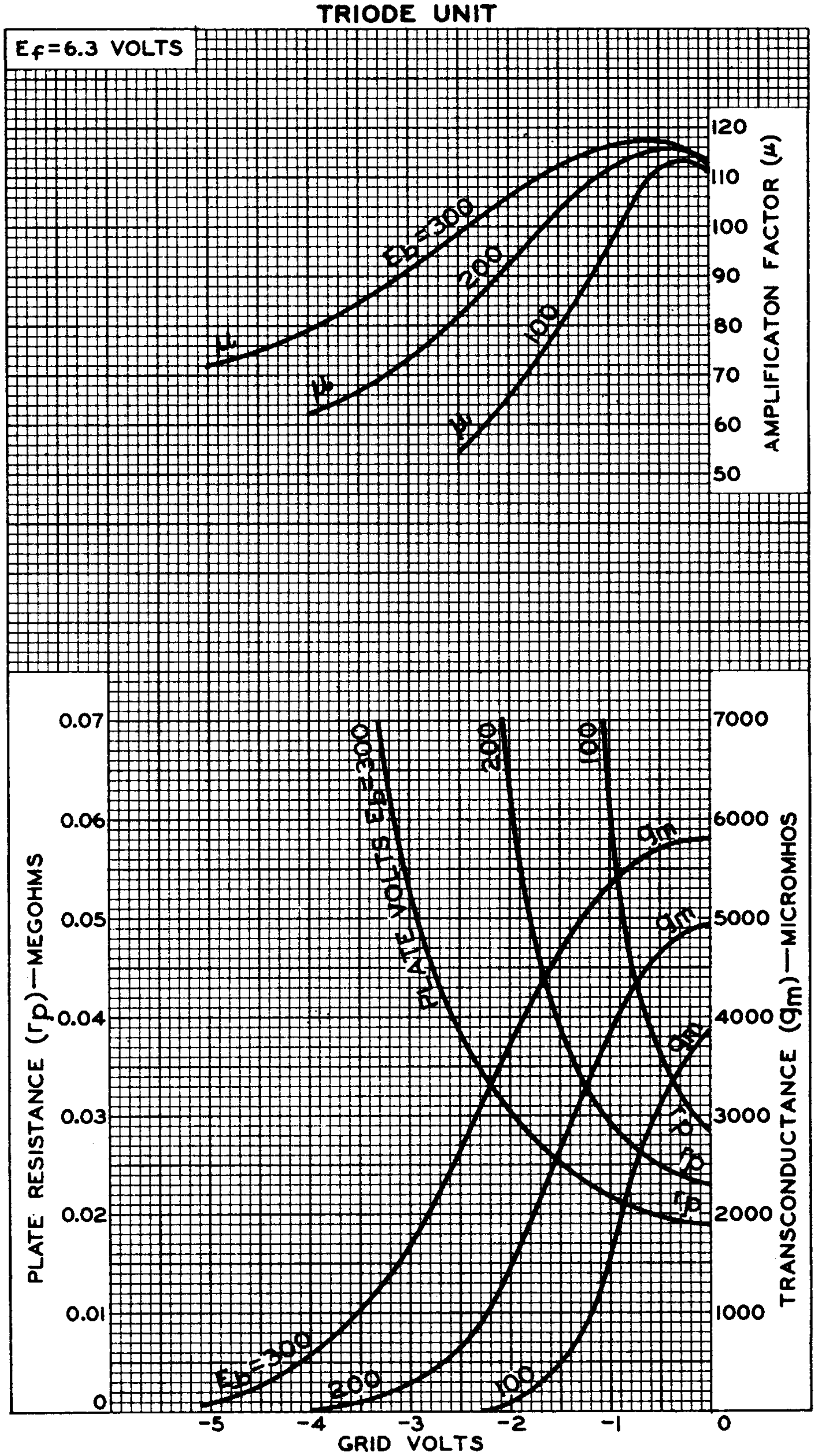

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## AVERAGE CHARACTERISTICS
### TRIODE UNIT

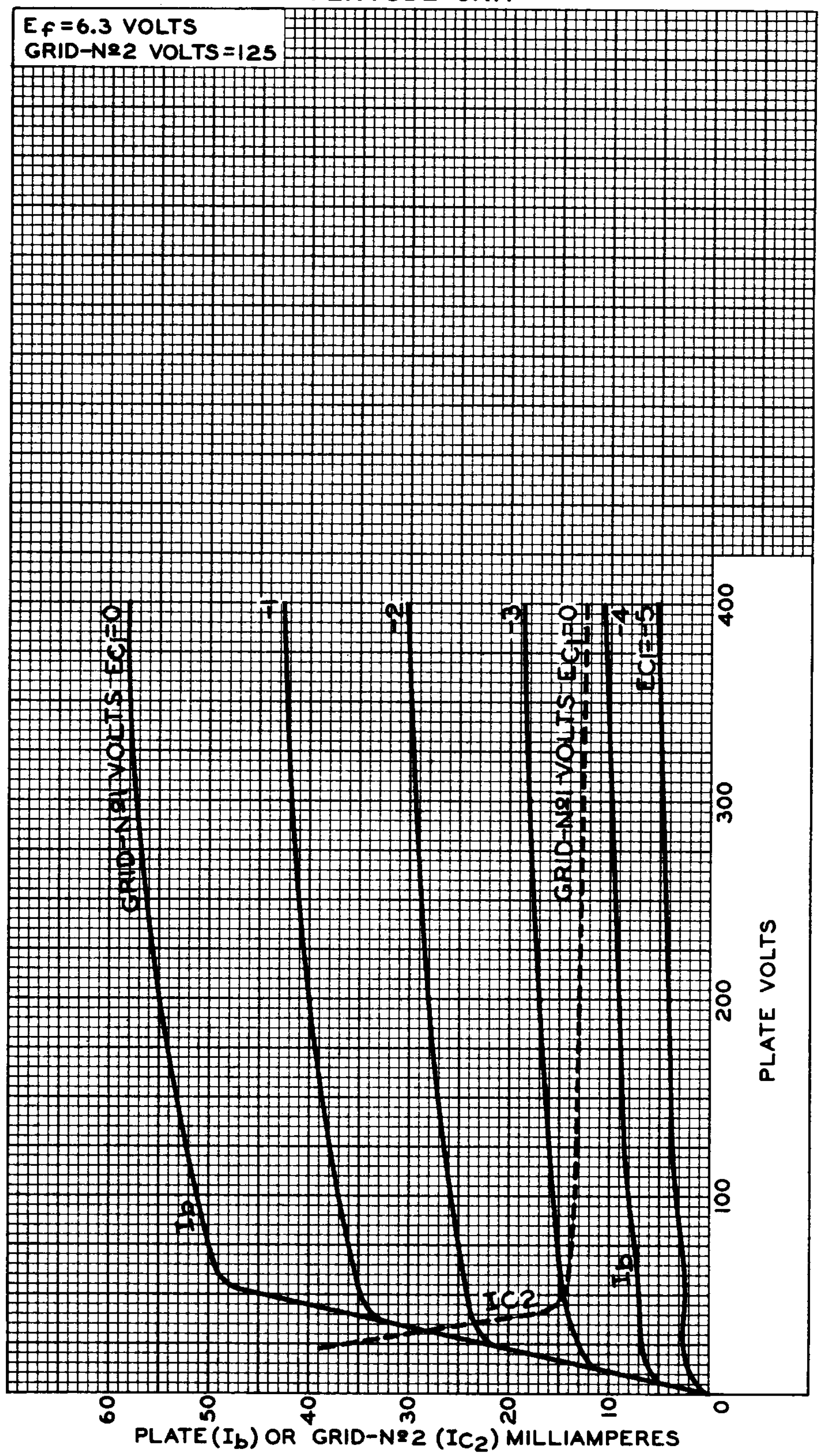



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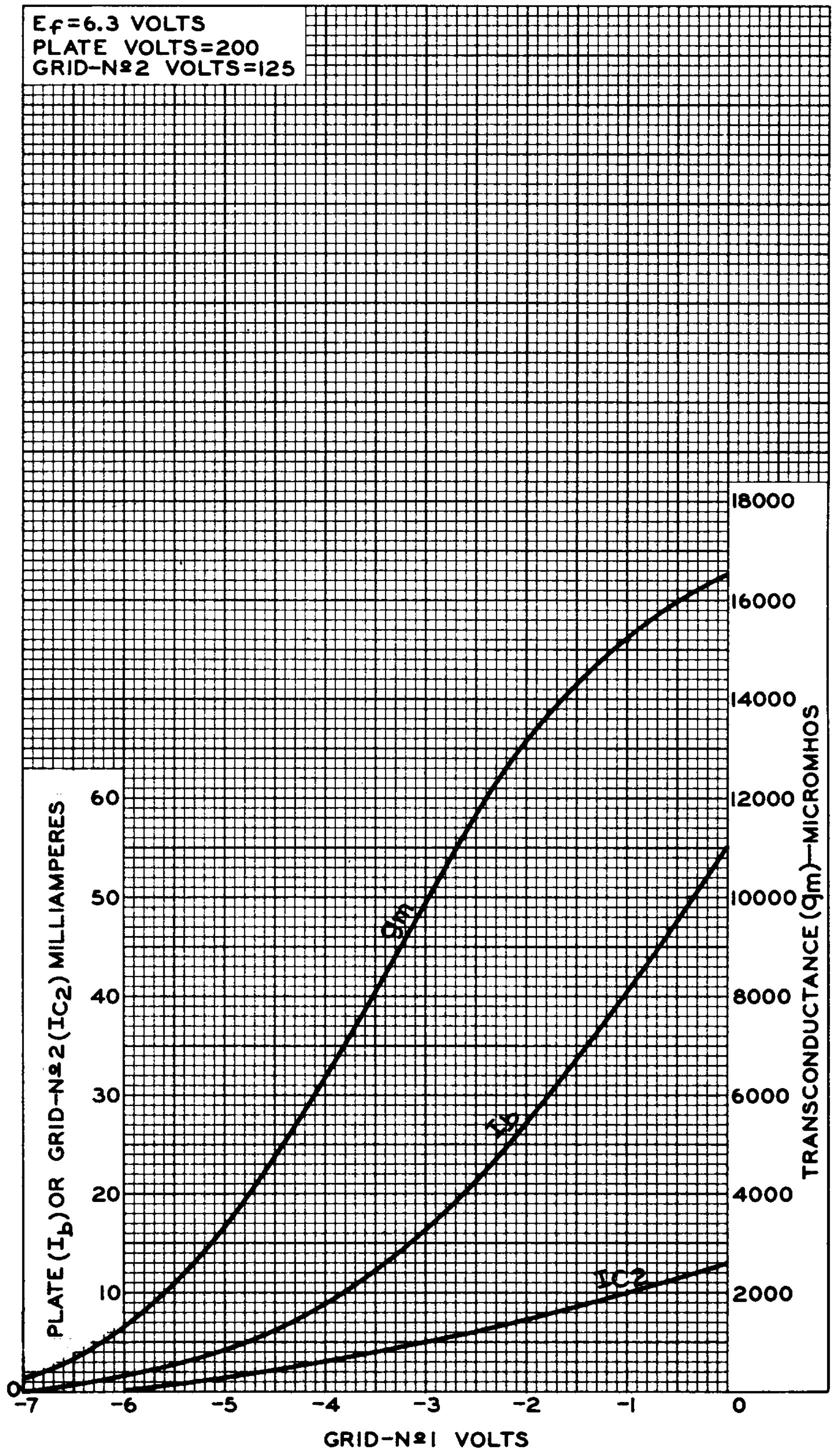
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## AVERAGE CHARACTERISTICS
### PENTODE UNIT



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## AVERAGE CHARACTERISTICS

### PENTODE UNIT




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